

VIA ECFS

October 1, 2019

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**EX PARTE FILING OF ENCINA COMMUNICATIONS CORPORATION
RE NOTICE OF PROPOSED RULE MAKING
ET DOCKET 18-295 UNLICENSED USE OF THE 6 GHZ BAND AND
EXPANDING FLEXIBLE USE IN MID-BAND SPECTRUM
GN DOCKET NUMBER 17-183**

Dear Ms. Dortch:

On October 1, 2019, I met with Julius Knapp, Ira Keltz, Barbara Pavon, Bahman Badipour and Michael Ha, all with the Office of Engineering Technology.

I. DISCUSSION

We discussed alleviating roadblocks on the way to a Report and Order re flexible use of unlicensed devices in the U-NII-5 and U-NII-7 bands. Unlicensed devices are available today from Amazon and other outlets, and industry urgently needs an FCC Report and Order to upgrade these unlicensed devices to operate in licensed 6 GHz bands.

From the filings in this proceeding it appears that the 3 major roadblocks on the way to a Report and Order are:

- Public Safety Concerns -- raised by fixed service operators.
- Cost -- Concerns of equipment and component manufacturers that AFC will make the cost of Access Points prohibitively expensive.
- The Digital Divide -- WISPs express concerns that low EIRP and height restrictions will hinder their ability to help close the Digital Divide, which is the Commission's #1 Strategic Goal.

The 3 Types of Proposals submitted under this docket are:

1. *Safe Area Coordination (SAC) Before AFC of Deployed Unlicensed Devices*
2. *AFC After Deployment of Unlicensed Devices*
3. *Random Deployment of Uncoordinated Unlicensed Devices*

Proposal Type 1: *SAC Before AFC* alleviates roadblocks on the way to a Report and Order because:

- ✓ It achieves the degree of safety which is expected by fixed service operators because it uses the procedures of TSB10 and Part 101.103 of the Rules -- including a prior coordination notice and peer review -- before unlicensed devices are deployed.
- ✓ It incorporates very simple, very low-cost AFC using existing hardware and software.
- ✓ It allows unlicensed devices to be safely deployed indoors and outdoors without low EIRP and low height requirements, making it possible for WISPs to use PtMP in the 6 GHz bands to help close the Digital Divide.

Proposal Type 2: *AFC After Deployment of Unlicensed Devices* does not alleviate roadblocks on the way to a Report and Order because:

- It does not achieve the degree of safety which is expected by fixed service operators because it does not use the procedures of TSB10 and Part 101.103 of the Rules -- including a prior coordination notice and peer review -- before unlicensed devices are deployed.
- It will have to incorporate a very complex, unproven and untested AFC. It will also need a new database of over 950 million devices, compared to the ULS database of only 50,000 licensed devices.
- The low outdoor EIRP and low height restrictions will hinder WISPs' use of PtMP in the 6 GHz bands and hinder closing the Digital Divide.

Proposal Type 3: *Random Deployment of Uncoordinated Unlicensed Devices*

i. The reason given by RLAN proponents for not using AFC is that it will be too expensive.

- The facts are that today over 90% of client devices have GPS, and *SAC Before AFC* only requires a very simple GPS. So adding GPS to APs does not materially change the cost.

ii. The argument put forward by RLAN proponents is that only a small percentage of unlicensed devices will cause harmful interference.

- We agree that there would be millions of locations where randomly deployed unlicensed devices will not cause harmful interference. However, there are millions of locations where randomly deployed unlicensed devices will cause catastrophic interference as well as harmful interference.

We assert that all arguments regarding the use of unlicensed devices in licensed bands must be based on industry accepted procedures and equipment data sheet information. If measured data is not available, then -- as public safety is at risk -- a worst-case scenario must be considered.

We gave examples in the Appendix where we used Alcatel MDR 8606 radios, and Commscope VHLPX3-6W antennas. Also, as building loss data at 6 GHz is not available for the vast majority of offices, we used the scenario of unlicensed devices in offices with windows. It has been reported that window loss at 6 GHz can vary widely from 2 dB to 35 dB. Therefore, in these examples we used 2 dB.

II. CONCLUSION

Because *SAC Before AFC of Deployed Unlicensed Devices*:

- ✓ Achieves the degree of safety expected by fixed service operators because it uses the procedures of TSB10 and Part 101.103 of the Rules -- including a prior coordination notice and peer review -- before unlicensed devices are deployed.
- ✓ Incorporates very simple, very low-cost AFC using existing hardware and software.
- ✓ Allows unlicensed devices to be safely deployed indoors and outdoors with the FCC-proposed EIRP of 36 dBm and as high as the height of the Licensed Reference Station (for example, a 300-meter building), making it possible for WISPs to use PtMP in the licensed bands to do what they do best -- help close the Digital Divide, the Commission's #1 Strategic Goal.

To safely deploy unlicensed devices in licensed U-NII-5 & U-NII-7 bands, AFC must be used. And *SAC before AFC* is the only way to assure that there is no interference to existing fixed service operators, and that fixed service continues to thrive.

Therefore we believe *SAC Before AFC* opens the way to a Report and Order.

Respectfully submitted.

Michael Mulcay, Chairman & CTO

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